

I. Author: Šavol, Jakub

Name: Jak blockchain usnadňuje decentralizované obchodování s energií: Příležitosti a výzvy na peer-to-peer energetických trzích

II. The objective of the thesis and its accomplishment:

The aim of the thesis is to explore how blockchain technology facilitates the transition from centralized to decentralized energy markets, with a particular focus on peer-to-peer (P2P) energy trading, and to identify both the enabling mechanisms and the associated limitations of blockchain implementation in this context. The thesis has clear alignment between the research aim, research questions, methodology, and results. The objective is well defined and appropriate for a bachelor's thesis, and it is consistently pursued through a structured literature review and a multiple-case study design based on real-world projects. The research questions are clearly formulated. The introduction effectively contextualizes blockchain and energy markets, demonstrates relevance, and motivates the study.

However, the thesis could be improved by sharpening the problem statement in the introduction, explicitly highlighting the research gap earlier and more concisely. The research aim could benefit from a slightly more precise formulation regarding the intended contribution (e.g. analytical explanation versus practical guidance). Finally, while the qualitative approach is appropriate, a brief reflection on why alternative methods were not suitable, or how the findings might be complemented by quantitative research, would further strengthen the methodological justification. It also contains a number of important analytical or factual statements that are insufficiently supported by academic references, which weakens the reliability of some arguments.

III. Evaluation of thesis:

A. Theoretical part

The theoretical part of the thesis demonstrates a solid level of work with literature and is generally well aligned with the objective of the thesis, as it systematically introduces blockchain technology, energy markets, and peer-to-peer energy trading as a foundation for the empirical analysis. However, in several sections, important explanatory or evaluative statements are not sufficiently supported by references, which reduces the strength of the argumentation and academic rigor. While the literature review is broad, some parts remain more descriptive than analytical, and a deeper comparison or synthesis across authors could further strengthen the critical dimension. Additionally, although the literature review complies with the thesis objective overall, the explicit link between specific theoretical insights and the later case-study framework could be made clearer to reinforce continuity between the theoretical and empirical parts.

B. Methodology

The methodology used in the thesis is suitable in relation to the stated objective and the established research questions. The method of data collection is appropriate, relying on publicly available project documentation, academic sources, and independent evaluations, and the data processing is systematically organized through a consistent analytical framework and coding scheme. The methodology would benefit from a more explicit discussion of potential researcher bias inherent in qualitative content analysis and the steps taken to mitigate it. The justification for excluding alternative methods, such as quantitative or mixed-method approaches, could be elaborated to strengthen methodological rigor. Finally, the limitations related to reliance on secondary data and the varying quality of publicly available information could be discussed in greater depth to further enhance transparency.

C. Analytical part

The analytical part of the thesis demonstrates a good level of presentation and interpretation of the acquired data and is clearly aligned with the theoretical framework developed in the earlier chapters. A key strength is the systematic structure of the case analyses, which use a unified template and consistent facilitator (F) and drawback (D) coding, enabling meaningful comparison across cases and supporting cross-case synthesis. However, the interpretations

rely heavily on publicly available project descriptions without sufficient critical distance or independent validation, which may limit the robustness of conclusions. The depth of analysis varies slightly across cases, with some projects discussed more thoroughly than others. Additionally, while the link to theory is present, it could be strengthened by more explicitly referencing specific theoretical authors or concepts when interpreting empirical findings, thereby reinforcing the connection between theory and practice.

D. Recommendations

The recommendations presented in the thesis are generally relevant to the processed data and logically derived from the results of the case analyses and cross-case synthesis. However, the recommendations remain relatively general and could be strengthened by greater variation and specificity, for example by differentiating more clearly between short-term, medium-term, and long-term measures or between different stakeholder groups. Expanding the recommendations with a clearer economic perspective and more explicitly linking each proposal to empirical evidence from specific cases would improve their overall practical and analytical strength.

IV. Formal requisites and layout:

The thesis largely complies with the formal requirements of the directive, particularly in terms of overall text structure, logical chapter organization, and consistent formatting, which contribute to good readability and clarity. The language level is generally appropriate for an academic bachelor's thesis. The use of graphic elements, such as tables and the conceptual model, is purposeful and supports the presentation of data and results by enhancing transparency and comprehension. A number of important factual or interpretative statements are not sufficiently supported by references, which weakens academic rigor. Minor language issues, including occasional overly long or stylistically awkward sentences, reduce clarity in some passages. While graphic elements are relevant, their integration into the text could be improved by more explicit referencing and interpretation.

V. Recommended questions for the defence:

1. What was the main research gap that motivated you to focus specifically on blockchain-based peer-to-peer energy trading rather than on blockchain applications in the energy sector more generally?
2. Why did you choose a qualitative multiple-case study approach, and what are the main advantages and limitations of this method in relation to your research objective?
3. How did you ensure the validity and reliability of your findings given that your analysis relies primarily on publicly available secondary data?
4. Can you explain how the facilitator (F) and drawback (D) coding scheme was developed and how it contributed to answering your research questions?

VI. Conclusion:

I declare that the submitted thesis "How Blockchain Facilitates Decentralized Energy Trading: Opportunities and Challenges in Peer to-Peer Energy Markets" meets (with the reservations brought forward) both formal and content-related requirements on final thesis, and that the reader does not consider the thesis plagiarism, nor is the reader aware of the fact that the author of the final thesis has committed plagiarism.

VII. I recommend the evaluation: passed

Feybi Ariani Goni 8. 1. 2026

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